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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/457,209	12/08/1999	BRADLEY CAIN	120-025	7418
34845	7590	10/18/2007	EXAMINER	
McGUINNESS & MANARAS LLP			ZIA, SYED	
125 NAGOG PARK			ART UNIT	PAPER NUMBER
ACTON, MA 01720			2131	
			MAIL DATE	DELIVERY MODE
			10/18/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/457,209	CAIN, BRADLEY
	Examiner	Art Unit
	Syed Zia	2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 05 July 2007.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-26 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,4,6-9,11,13-16,18,20-22,25 and 26 is/are rejected.  
 7) Claim(s) 3,5,10,12,17,19,23 and 24 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
     Paper No(s)/Mail Date 8/03, 8/02.

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

This office action is in response filed on July 7, 2007. Original application contained Claims 1-24. Applicant previously amended Claims 1-5, and 8-24, and added new claims 25, and 26. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. Therefore, presently pending claims are 1-26.



AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

### *Response to Arguments*

Applicant's arguments with respect to claim 1-26 have been considered but are moot in view of the new ground(s) of rejection.

### *Allowable Subject Matter*

Claims 3,5, 10, 12, 17, 19, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4, 6-9, 11, 13-16, 18, 20-22, and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Armstrong et al. (U. S. Patent 5,542,047).

3. Regarding Claim 1 Armstrong teaches and describes a system and method that relates generally to computer network systems, and more particularly relates to a distributed network monitoring software system for monitoring the status of network nodes and links and determining the condition of communications links using an adaptive procedure to identify intermittent links, comprising:

- periodically calculating a reliability factor for communicating with a neighbor; and varying a frequency for sending keep-alive messages to the neighbor based upon the reliability factor (col. 2 line 63 to col. 3 line 48).

4. Regarding Claim 8 Armstrong teaches and describes a device for sending keep-alive message to a neighbor in a communication network, the device comprising:

- reliability calculation logic operably coupled to periodically calculate a reliability factor for communicating with the neighbor, and frequency variation logic responsive to the reliability calculation logic and operably coupled to calculate a frequency for sending keep-alive messages to the neighbor based upon the reliability factor (col. 2 line 63 to col. 3 line 48).

5. Regarding Claim 15, Armstrong teaches and describes a program product comprising a computer readable medium having embodied thereon a computer program for sending keep-alive messages to a neighbor in a communication network, the computer program comprising:

- reliability calculation logic operably coupled to periodical calculate a reliability factor for communicating with the neighbor, and frequency variation logic responsive to the reliability calculation logic and operably coupled to determine a frequency for sending keep-alive messages to the neighbor based upon the reliability factor (col. 2 line 63 to col. 3 line 48).

6. Regarding Claim 22, Armstrong teaches and describes plurality of interconnected devices including a node and a neighbor in communication over a communication link, wherein the node is operably coupled to send keep-alive messages to the neighbor, and wherein the node is operably coupled to vary a frequency for sending keep-alive messages to the neighbor based upon a periodically computed reliability factor for communicating with the neighbor over the communication link (Fig. 1 and col. 2 line 9 to col. 3 line 48).

4. Claims 2-6, 9-13, 16-20 and 23-24 are rejected applied as above in rejecting claims 1, 8, 15 and 22. Furthermore, Armstrong teaches and describes a system and method for managing of network components, and in particular, to a network management method and system using active monitoring and status reporting, wherein calculating the reliability factor for communicating with the neighbor comprising:

As per Claims 2, 9, and 16, determining a reliability for the neighbor, and calculating the reliability factor based upon the reliability for the neighbor (col. 9 line 31 to col. 10 line 27 and col. 11 line 12 to line 34);

As per Claims 4, 11, and 18, determining a reliability for the neighbor, measuring a reliability for a communication link to the neighbor, assigning a relative weight to each of the reliability for the neighbor and the reliability of the communication link to the neighbor, and calculating the reliability factor to be a weighted average of the reliability for the neighbor and the reliability of the communication link to the neighbor (col. 11 line 12 to line 34 and col. 2 line 63 to col. 3 line 48);

As per Claims 6, 13, and 20, updating the reliability factor, and adjusting the frequency for sending keep-alive messages to the neighbor based upon the updated reliability factor (col. 13 line 12 to line 35 and col. 14 line 2 to line 19).

5. Claims 7, 14, and 21 are rejected applied as above in rejecting claims 6, 13, and 15. Furthermore, Armstrong teaches and describes a polling mechanism which adjusted dynamically based on the intermittent condition of nodes and communication links, comprising:

As per Claims 7, 14, and 21, reducing the frequency for sending keep-alive

messages to the neighbor, if the updated reliability factor represents a reliability improvement for communicating with the neighbor; and increasing the frequency for sending keep-alive messages to the neighbor, if the updated reliability factor represents a reliability degradation for communicating with the neighbor (col. 14 line 2 to line 19).

6. Claims 25, and 26 are rejected applied as above in rejecting claims 4, and 11. Furthermore, Armstrong teaches and describes mechanism to calculate reliability factor based on weighted measured reliability of the communication link, and weighted reliability of neighbor i.e. reliability adjusted dynamically based on the intermittent condition of nodes and communication links (Fig. 3 and col. 9 line 31 to col. 10 line 27, and col. 14 line 2 to line 19).

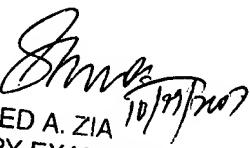
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Zia whose telephone number is 571-272-3798. The examiner can normally be reached on 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SZ  
October 9, 2007

  
SYED A. ZIA 10/19/2007  
PRIMARY EXAMINER